RHODE ISLAND DEPARTMENT OF HEALTH

~ Safe and Healthy Lives in Safe and Healthy Communities ~

Office of Drinking Water Quality

Capacity Development Program Report

Assisting and Improving Rhode Island's Public Water Systems

September 2005

Introduction

The mission of the Rhode Island Department of Health (HEALTH) is *"to prevent disease and to protect and to promote the health and safety of the people of Rhode Island."* As a result, Health is committed to striving for *"safe and healthy lives in safe and healthy communities"* throughout Rhode Island. An essential aspect of the mission is the effort of the Office of Drinking Water Quality (ODWQ) to ensure the safety of the state's drinking water. ODWQ coordinates a number of programs that help to ensure every resident of Rhode Island has safe drinking water at home, school, and work. The Capacity Development Program is an important part of this effort.

In accordance with Section 1420 of the Safe Drinking Water Act (SDWA) as amended in 1996, HEALTH has developed and implemented the Capacity Development Strategy since August 2000. The Act also requires that HEALTH submit a report to the Governor and to the public no later than two years after a State develops a Strategy, and every three years thereafter. The report must outline the efficacy of the State's Capacity Development Strategy and progress toward improving the capacity of public water systems.

Under the 1996 Amendments to the SDWA, Capacity Development is a State effort to help drinking water systems improve their finances, management, infrastructure, and operations so they can provide safe drinking water, reliably and cost-effectively. Capacity Development is an important component of the Act's focus on preventing problems in drinking water.

For purposes of this Strategy, Capacity means that a Public Water System has the Technical, Managerial, and Financial (TMF) capabilities to comply consistently with statutory and regulatory requirements of the Safe Drinking Water Act. Capacity enables the public water system to plan for, achieve, and provide water that is safe to drink today and into the future. The three major components of capacity identified in the 1996 Safe Drinking Water Act Amendments include:

1. ***Technical Capacity*** refers to a water system's ability to operate and maintain its infrastructure.
2. ***Managerial Capacity*** refers to the expertise of the water system's personnel to administer the system's overall operations.
3. ***Financial Capacity*** refers to the financial resources and fiscal management that support the cost of operating the water system.

This report outlines the progress that the Capacity Development activities have made towards improving the TMF capacity of Rhode Island's public water systems and discusses the efficacy of the Capacity Development Strategy. This report is broken down in the following manner:

I. Description of Rhode's Island's Capacity Development Program
    1. Overview of strategies/goals
    2. Growing pains: challenges
    3. Overview of improvements

A. Water System Ranking – assistance through prioritizing systems

B. Contracts
    1. Direct Technical Assistance Contracts
        a. Assistance with Drinking Water State Revolving Fund application (DWSRF)
        b. Assistance with Consumer Confidence Reports (CCRs)
        c. Assistance through a Circuit Rider
    2. Contract for General Training
        a. Assistance with certifying operators

C. Operator Certification Program

D. Outreach to Systems
    1. Mailings to water systems
    2. Web site

E. Community Outreach

II. Summary Assessment of the Program

III. Capacity Development Strategy Revision

IV. Looking Ahead

A. New initiatives/Program improvement

V. Lessons Learned

VI. Conclusion

Overall, the public water systems in Rhode Island have been successful in providing safe drinking water and improving their compliance with the Safe Drinking Water Act. However, there is still much work to be done in assisting water systems, especially small water systems, with achieving technical, managerial, and financial (TMF) capacity on a short-term and long-term basis. The ODWQ regulates approximately 482 public water suppliers in Rhode Island. This includes not only the major municipal water systems but also many other facilities such as schools, factories, restaurants, and day care centers that have their own water supplies.

Description of Rhode Island's Capacity Development Program

In Rhode Island, Capacity Development can be seen as the tapestry that weaves together HEALTH's drinking water program activities into a focused effort to help troubled public water systems. The Program assists the water systems in several ways by using the several components of the strategy. The components include:

- Prioritization of need (Water System Ranking)
- Assistance with understanding and getting access to the Drinking Water State Revolving Fund
- Technical assistance in completing the Consumer Confidence Reports
- On-site assistance through a Circuit Rider
- Training and cost reimbursement for operator certification
- Training to improve Managerial capacity
- Training to improve Financial capacity
- Ongoing program evaluation through a self-assessment survey

The Capacity Development activities are focused on preventive measures to assist all water systems instead of enforcement against troubled systems in non-compliance.

Since the last report, the ODWQ has been quite busy in implementing the Capacity Development strategies and planning future strategies to meet the needs of the water systems more effectively. However, there have been some challenges and barriers along the way. These are:

- Consumer apathy and resistance to change

- Water system owner/operator apathy
- Lack of water system management and long range planning
- Lack of trained/certified water system owner/operators
- Water system mistrust of State involvement
- Bureaucratic procedures impeding assistance to water systems
- Limited staff
- Lack of money

In this report, you will find that the Program has addressed some of the challenges and barriers and continues to look for new ways to resolve the other imminent issues.

Since the Capacity Development Strategies have been underway, there has been improvement in the technical capacity of water systems against the baseline criteria. Strategies to improve managerial and financial capacity are in the implementation process. Indications of improvement against the baseline can be summarized as follows:

- The annual prioritization of need for assistance shows that several existing systems this year have improved capacity.
- Capacity Development Program components are successful as measured through improved compliance with the Consumer Confidence Reports (CCRs), successful Operator Certification, and increased numbers of DWSRF applications & Project Priority Listings.
- Two systems have been approved for DWSRF for infrastructure improvements loans.
- Four additional training courses for systems has been implemented to improve the number of operators being trained and certified.
- Public Water System assessment survey results used to determine system needs.

A Capacity Development Coordinator assures an integrated effort with all aspects of the drinking water program; enhancing communication with water systems and the public; managing contracts for direct technical assistance; managing contracts for general training; and utilizing the water system ranking to target assistance efforts.

A description of each component of the Capacity Development Program follows:

Water System Ranking

Prioritization of need

An annual water system ranking is used to prioritize systems for capacity assistance. The following describes the ranking method which assigns systems to one of four priority levels:

Level One Systems are systems with sufficient capacity, assistance is not recommended. These systems are monitored to ensure continued compliance with regulations.

Level Two Systems are water systems that are presently in compliance, but would benefit from Capacity Development assistance.

Level Three Systems are water systems that are not presently in compliance, but can be brought into compliance via Capacity assistance.

Level Four Systems are systems not in compliance that cannot be brought into compliance through Capacity assistance. Enforcement action is required.

The ranking process focuses on the small systems serving a population under 10,000 that could most benefit from Capacity Development strategies and includes a staff assessment of all the public water systems resulting in assignment of each system to a priority level using the criteria discussed below.

The ranking system does not rate systems from best to worst, but rather identify systems that would benefit most from the capacity development tools we have to offer. Level 3 systems the highest priority. Level 2 systems that can be advanced to Level 1 with technical or financial assistance were the next highest priority. The prioritization is based on a staff evaluation of the following criteria:

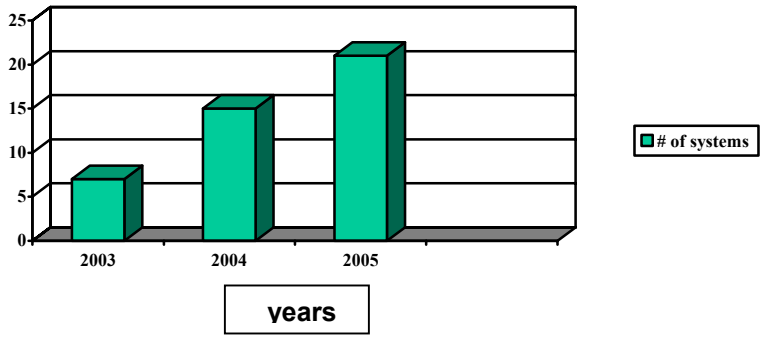
- Compliance data (Significant Non Compliance list, Sanitary Survey results, and staff knowledge)
- DWSRF data (Application materials, project priority list, disadvantage community status, Intended Use Plan)
- Public Water System data (Consumer Confidence Report (CCR),Source Water Assessment Operator Certification status, consumer complaints)
- Annual license renewal data

The ODWQ has found that targeting systems most in need is an important method of focusing our efforts. Most water systems are assigned to Level 2 and Level 3. There are no Level 4 systems at present and a number of water systems were assigned to Level 1. The issues facing the Level 2 and 3 systems are being assessed and there will be ongoing assistance to these systems using the Capacity Development strategies. On average, there are forty systems per year identified as needing assistance.

- Several existing systems over the past several years have improved capacity, thereby progressing from a higher priority level to a lower one. The following systems have not only made improvements but maintained compliance with state and federal regulations.

Shannock Cooperative Water Association PWSID# 1647529 Hemlock Estates PWSID# 2943224 Prudence Island Utility Corporation PWSID# 159202 Pawtucket Water Supply Board PWSID# 1592021 Woodpecker Hill Nursing Home PWSID# 2000004

Numbers Of Water Systems That Improved
2003 - 2005



The graph illustrates the number of systems that have made improvements and achieved compliance by: adopting new by-laws, replacing malfunctioning equipment, installing new storage tanks, and resolving lead/copper issues. The number of systems making improvements increased from five systems in 2002 (see previous report), seven systems in 2003, fifteen systems in 2004 to twenty-one

systems in 2005. Technical assistance through the Capacity Development Program was the major factor in these improvements.

Contracts

The Office of Drinking Water Quality has several contracts to assist water systems through on-site one on one technical training and general training. These contracts have been successful in assisting water systems to be pro-active in maintaining compliance and preventing non-compliance. Several water systems have made improvements and progress through technical assistance efforts. Three small systems in particular (Deerfield Commons, Slatersville Public Supply, and Nasonville Water Company) have established a collaborative effort in using a certified operator and using a larger system to assist with water system operation and management.

Contracts for Direct Technical Assistance

There are three contracts for direct technical assistance. They include: outreach to encourage use of the Drinking Water State Revolving Fund (DWSRF), preparation of Consumer Confidence Reports (CCRs), and a Circuit Rider to troubleshoot targeted water systems.

These contracts provide the necessary assistance that system operators need to maintain and improve the overall capacity of their systems. The focus of these efforts is on the water systems serving populations under 3,300, which make up approximately three quarters of the public water systems in Rhode Island. These water systems face many challenges with extremely limited resources, unlike the large systems, that have greater resources such as trained managers and operators, money, and more staff. These contracts have not only helped water systems achieve compliance but they have also prevented non-compliance through improved communication with the water systems and creating opportunities to troubleshoot issues before compliance issues occur.

Assistance with understanding and getting access to the Drinking Water State Revolving Fund

The contract, which was awarded to the Atlantic States Rural Water and Wastewater Association (ASRWWA) for outreach to encourage use of the DWSRF has made progress in its efforts. ASRWWA has visited and mailed materials to 110 systems in the past several years and provided additional assistance to small water systems regarding applying for DWSRF by following-up with systems that have not yet

completed the application process. The Office of Drinking Water Quality received confirmations from several public water systems of their intent to finance projects and two projects are starting in the next few months.

Over the past several years, the systems below have been approved for DWSRF and have financed single or multiple infrastructure improvements. The date(s) in the list indicates when the project was completed.

Providence Water Supply Board PWSID# 1592024	2003-2004 multiple projects
Camp Jori PWSID#2980199	2003 multiple projects
Woonsocket Water Department PWSID#1559518	2003-2004 multiple projects
Kingston Water District PWSID#1858421	2003 project
Smithfield Water Supply Board PWSID#1615616	2002 project
Pascoag Fire District PWSID#1592020	2002 project
Prudence Island Utility Corp. PWSID#1592023	2003 project
North Tiverton Fire District PWSID#1592018	2003-2005 multiple projects
Block Island Water Company PWSID#1858430	2003 project
Lincoln Water Commission PWSID#1858423	2004 project
Town of West Greenwich PWSID#1900056	2005 project
Pawtucket Water Supply Board PWSID#1592021	2003-2004 and ongoing multiple projects
East Providence Water Department PWSID#1615610	2003 project

These projects range in size from a $51,000,000 water main rehabilitation to a $25,000 new tank for a small water system. Thirteen projects were financed for over $300,000; five systems financed and completed multiple projects; and one small system has financed multiple projects with a $700,000 project.

Each fall, ASRWWA conducts informational meetings around the State to inform water systems of the DWSRF and to offer assistance with the application process. Each year, approximately 23 individuals from various water systems attended the meetings and from this number 6 systems applied for the loan and completed the system improvements. ASRWWA has developed a DWSRF brochure for distribution to the water systems and they also mail a quarterly newsletter to the water systems with updates and information regarding the DWSRF, which has increased the awareness of the loan program.

Technical assistance in completing Consumer Confidence Reports

The contract for assisting small systems with preparing their CCRs is also administered by ASRWWA. ASRWWA, in collaboration with the ODWQ, has successfully written the CCRs each year for the small community water systems in Rhode Island. They did an extensive follow-up via e-mail, phone, or fax and survey to make sure that the CCRs were distributed properly.

The following summarizes water system assistance with the CCRs:

65-67 small community water systems (per year) received guidance and assistance in producing their CCRs over the past several years.

61 small community water systems received guidance and assistance in producing their CCRs last year.

22-34 small community water systems (per year) received a CCR violation for not meeting the specified requirements over the past several years.

8 community water systems received a CCR violation for not meeting the specified requirements last year.

A phone survey was taken that focused on the effectiveness and usefulness of the assistance, 53 responded (out of the 61calls) and stated that the assistance afforded them the opportunity to be aware of the technical, managerial, and financial concerning their water systems. In addition, the assistance reminded them of the requirements.

The number of systems receiving assistance and the number of systems receiving CCR violations have decreased due to the Program empowering the system owner/operator to organize, develop and distribute the CCR to their consumers following the specified requirements.

On-site assistance through a Circuit Rider

A Circuit Rider has been collaborating with the internal staff to: target specific systems with lead and copper problems, conduct on-site visits after inspections and/or violations, and focus on the systems that have a history of significant non-compliance, and the very small water systems, i.e. mobile home parks. Each month, the Circuit Rider visits approximately 20-25 water systems. With the Circuit Rider's on-site assistance, sanitary survey deficiencies are resolved in a timely manner, as well as some challenging lead and copper issues. We have found that the Circuit Rider's assistance has enabled systems to improve their capacity as seen through the water system ranking.

The following summarizes the Circuit Rider's activities:

20-25 on-site visits per month:
Approximately 12 visits are for sanitary survey follow-up, in which half of the deficiencies are resolved.
Approximately 10-12 are for technical assistance with compliance issues, in which half are resolved.

In the past several years:
Monitoring violations have decreased by 40%.
Quality violations have decreased by 20.5%.
Lead and copper violations have decreased by 70%.

Concurrently, ASRWWA and the Office of Drinking Water Quality are discussing efforts that involve the financial and managerial aspects of Capacity Development, as well as more technical training to assist the water systems in long range planning. Assistance to small water systems in developing association by-laws is an area that is presently being developed.

Contracts for General Training

Training and cost reimbursement for operator certification

The contract with New England Water Works Association (NEWWA) provides general training classes to prepare water system operators for the operator certification exam. In consultation with the ODWQ, NEWWA has developed and held three classes annually in various locations in Rhode Island that are easily accessible to the water systems. These classes are based on the California State University drinking water operator training course. They are designed to assist small water system operators in building essential knowledge and key skills and prepare them for the Rhode Island Drinking Water Operators Certification Examination. In addition, throughout the year, NEWWA conducts other courses that focus on the specific needs of the systems in the areas of water system maintenance and operations. These classes allow operators to maintain their certification through obtaining Continuing Education Units and Training Contact Hours. NEWWA has developed, organized, and advertised these training classes through mass mailing of brochures and phone solicitation. At the end of each training class, the operators are asked to complete a training assessment questionnaire that focuses on the class content, the effectiveness of the instructor's presentation of the materials, and how the training course can be improved. The results of the questionnaire has helped in determining the needs of the operators.

On average, 11-18 operators participated in each course; 880 hours of training was received; and approximately half of the operators (participating in the exam prep course) have passed the exam since the training started.

The following summarizes the technical training courses that have been offered:

Operator Certification Exam Preparation Course
Identifying and Correcting Sanitary Deficiencies
Corrosion Control Operation & Treatment
Sound Procedures for Small Water System
Pumps and Pumping Overview
Nurturing Your Chemical Feed Pumps

Basic Electricity and Electrical Safety Overview Successfully Operate and Maintain A Ground Water System The Troubleshooter: Maximizing Your Pump Efficiency Basic Chemistry Concepts and Applied Water Chemistry Meeting the Surface Water Treatment Rule requirements in RI Hands on Disinfection with Chlorine Source Water Protection Planning Drinking Water Quality Sampling Hands-on Problem Solving for Chemical Feed System Iron and Manganese Removal Distribution System Protection Lead and Copper Drinking Water Rule

Operator Certification Program

The operator certification requirement improves capacity through the training needed to pass the initial examination and through the continuing education requirements needed for renewal.

Since the new operator certification requirements came into effect, the program has achieved 100% compliance for the smaller water systems. With the assistance of the Circuit Riders' on-site visits to the systems, along with the technical assistance courses, there are 425 operators who have been certified and trained to operate their systems in compliance.

In addition, over the 1½ years, the ODWQ has implemented the Operator Certification Expense Reimbursement Program (ERP). The ERP uses the Expense Reimbursement Grant funds to provide free training and testing services for small water system operators for initial certification and renewal. In addition, comprehensive and very low cost ongoing training to operators of community and non-transient non-community water systems serving 3,300 persons or fewer is also provided. There are approximately 147 of these systems. HEALTH's small water system certification program has addressed the training needs of operators in RI by providing courses free of charge, reimbursement of past and future expenses, and on-site assistance to aid in achieving and maintaining compliance. The ERP efforts combine with the efforts of the Operator Certification Program to ensure that all requirements of the State's newly revised Drinking Water Operator Certification regulations are met. The Circuit Rider has played a major role in the Program by distributing training materials and handouts of rules/regulations; administering an on-site survey assessing the operator's knowledge of their system; providing a VSS "very small system" 3 hour training course on-site; and providing training CD's for operator certification renewal credits. Thus far,

the Circuit Rider's on-site assistance to the water systems has proven to be a valuable approach to eliminating some of the barriers that small system operators face in obtaining training.

The following summarizes the Circuit Rider on-site assistance:

120 systems received an onsite visit for one or more of the activities stated above.
62 operators received the VSS on-site training course
37 of the 62 operators renewed their certification
40 on-site assessment surveys completed
15 training CD's have been distributed

Outreach to Systems

In addition to providing assistance to the water systems through contracts, the Capacity Development Program has been striving to enhance communication between the water systems and the ODWQ in several ways. We have found that systems that are in communication with the Office have a lower rate of non-compliance issues, are more likely to have competent and trained owners and operators, and are more likely to pursue and complete system improvements. For the past several years, the Capacity Development Coordinator has been organizing quarterly regional meetings with public water system operators and the ODWQ staff. These meetings provide the opportunity to update operators regarding rules and regulations, and answer any questions they may have concerning their own water systems.

The Capacity Development Program also does several mass mailings to the all the water systems to inform or update them on regulatory issues, emergency procedures for hurricanes, upcoming training courses being offered, and upcoming annual water association conferences. Several articles have been published in the Rhode Island Water Works Association newsletter that highlighted the drinking water program, upcoming rules and regulations, and contact names of the staff relating to various drinking water issues. Also, the ODWQ has collaborated with the RI Water Resources Board and the RI Water Works Association to produce radio messages that informed the public of water quality issues and water conservation.

Within the past year, the following tools have been utilized to offer supplemental assistance to the water systems:

a) The ODWQ offered webcasts (sponsored by the EPA Drinking Water Academy) on the following topics: a) Introduction to Capacity Development, b) Stage 1 Disinfectants & Disinfection By-Products Rule, c) Consumer Confidence Report Rule, d) Financing Security Hardware for a Utility, e) Total Coliform Rule, f) Surface Water Treatment Rule/Long Term 1 Enhanced Surface Water Treatment Rule, g) Source Water Contamination Prevention Measures and h) Public Communications on Lead in Drinking Water (sponsored by the American Water Works Association).

b) The "Operator Basics Training Series" CD course developed by the Montana University Water Center has been distributed to 15 small water systems by the Circuit Rider. It is an interactive CD that covers various topics and tests the operator's knowledge of the topics at the end of the course.

c) "A Small Systems Guide to the Total Coliform Rule (TCR) and the Total Coliform Rule Monthly Monitoring Worksheets" has been distributed to 7 small water systems. This guide has been used to reinforce the need to comply with the TCR.

The Capacity Development Program has established a web presence through HEALTH's web site, www.health.ri.gov . Suppliers can find information regarding the Capacity Development Program through a link on the web page.

Community Outreach

The contract with the University of Rhode Island Cooperative Extension (URI CE) is a multifaceted contract that involves municipal capacity training and public outreach. URI CE, in collaboration with the ODWQ, has developed a menu of educational programs for local officials, water suppliers and residents. The following describes the program:

a) A series of three workshops link the results of the source water assessments and land use to the importance of water quality are held with local officials. These workshops are Linking Land Use to Water Quality, Building Drinking Water Protection into Town Ordinances, and Using Computer Generated Maps in Project Review.

b) Fact sheets regarding drinking water issues of importance to the water suppliers and the public are distributed via mail, workshops, and their website;

c) Informative tools for residents regarding water quality concerns and educating the local "decision makers" and partnering with local water systems officials to discuss water quality issues are provided;

d) Residential/private well water protection workshops are held around the state focusing on types of wells, basic care, well water monitoring and treatment of systems to protect a family's health.

The following summarizes the URI CE efforts:

30 Residential/Private Well workshops offered.
Over 600 individuals have attended the Regional Residential/Private Well workshops.
Approximately 250 workshop evaluations collected; 90% stated that the workshop provided valuable practical information.
25 Town/Community meetings occurred; 8 workshops offered to town officials
62% of the officials completing the evaluation indicated that some changes or decisions had resulted from the SWAP and the workshops.
32 Drinking Water fact sheets have been developed and distributed via mail and workshops.
10 Municipal Official fact sheets are currently being developed.

Summary Assessment of the Program

This report has evaluated and described the activities of each component of the Capacity Development Program. This section summarizes the effectiveness of each component of the Program. The Program has made strides in several areas. In some cases, however, it is too early to measure the effectiveness against the baseline.

Water system ranking

Current Status: Clearly, we have seen major improvements in 5 systems that were discussed previously. These systems have not only made significant improvements but they have been able to meet and exceed the compliance requirements over the past several years. The graph (page 7) illustrates the increase in the number of systems that have improved.

Observations: The Program has focused a concerted effort on assisting troubled water systems and continuing the assistance so that the system won't fall prey to repeat non-compliance issues. All 5 systems have remained in compliance.

Direct technical assistance

Current Status: DWSRF - Improvements have been made in assisting systems with infrastructure improvements through the DWSRF. Over the past several years, not only have systems financed projects but they have financed multiple projects with the anticipation that water quality and compliance issues will decrease with improvements to their system. Thirteen projects were financed for over $300,000; five systems financed and completed multiple projects; and one small system has financed multiple projects with a $700,000 project. There are several systems in the process of going through the application process and there are two projects starting in the next several months.

Observations: The application process can be arduous especially for the small systems, who historically have had trouble completing the process. However, with the assistance of the Program two small systems have been approved for improvements. ODWQ is anticipating that the upcoming DWSRF informational meetings will increase awareness of the Program so more systems will have the opportunity to receive assistance.

Current Status: CCR – For the past several years, approximately 65-67 small water systems have received assistance with producing their CCRs. Not only has the number of systems receiving violations decreased but the number of systems needing assistance with preparing their CCRs has decreased as well.

Observations: The Program has helped systems improve in meeting the requirements and has made the systems aware of capacity issues concerning their systems as stated earlier from the phone survey. As awareness concerning capacity increases, systems are prepared to do their own CCRs and are more likely to comply with the requirements.

Current Status: Circuit Rider – The Circuit Rider has been visiting 20-25 targeted systems monthly. He has provided technical guidance and assistance that has resulted in short-term and long-term improvements to the capacity of the systems. The Circuit Rider is able to focus on sanitary survey deficiencies, which can make a difference in the system's overall capacity.

Observations: Over the past several years, the Circuit Rider has been making strides in resolving short-term compliance issues with systems. In the past several years, monitoring violations have decreased by 40%, quality violations have decreased by 20.5%, and lead and copper violations have decreased by 70%. This can be due to the diligent work of the Circuit Rider in collaboration with the DWQ staff. With consistent on-site follow-up, small systems can make lasting changes and improvements.

General Training

Current Status: NEWWA courses – On average, NEWWA courses have 11-18 operators in attendance. Most of the operators that attend the courses are from small water systems. To date, half of the operators who attended the preparatory exam course passed the exam.

Observations: The operators that have taken the courses have completed a training assessment questionnaire at the end of the course. From the questionnaire, we have found that the NEWWA courses are helpful and necessary to assist operators. Our intent is to continue the courses annually and to collaborate with NEWWA to increase the course participation.

Training to improve financial and managerial capacity:

Current Status: Presently, we are not conducting financial and managerial training. Recently, two contracts with Resources for Communities And People (RCAP) Solutions have been finalized and will be underway in the next several months. The contracts will assist small systems with preparing capital improvement plans and operation and maintenance manuals.

NEWWA will be offering several courses over the next year that address financial and managerial capacity issues.

ASRWWA will be assisting water systems with preparing a water system budget and constructing a model rate structure.

Observations: We have found that Non-community water systems are wary of sharing financial information with the state, and distrust new programs that are not based on regulations. New programs in these two areas are being offered through technical assistance providers that have gained the trust of the water suppliers. ODWQ anticipates that these contracts will provide much-needed assistance for small systems. From the self-assessment survey, these systems have identified their need for financial and managerial assistance.

Capacity Development Strategy Revision

The Office of Drinking Water Quality made a revision to the Capacity Development Strategy to include a more comprehensive approach to resolving water quality issues. The OWDQ provides funding to the RI Water Resources Board to complete a supplemental water study that includes gathering public water system data with regard to adequacy of supply, and redundancy of infrastructure and supply. The data will be used as additional criteria for prioritizing the needs of public water systems. In addition, contingency planning will be addressed by utilizing water supply studies. This project is twofold in that it seeks to identify potential water supplies that could be used during a water shortage and it seeks to encourage the diversification and development of alternate water supplies during a natural disaster or act of terrorism.

Looking Ahead

The following summarizes the new initiatives and program improvements:

Financial and Managerial Assistance

The Office of Drinking Water Quality has finalized two contracts with Resources for Communities And People (RCAP) Solutions to focus on assisting small systems with:

a) Capital Improvement Plan Preparation – assess and evaluate each system, financial statement preparation for loan and/or grants, prioritize short and long term improvements to the system infrastructure, and construction cost estimate and sinking fund requirements, etc.

b) Operation and Maintenance Manual Preparation – provide hands-on assistance in using a template to prepare a system specific operation and maintenance manual that includes detailed maintenance schedule, emergency operating procedures, and a contingency plan.

ASRWWA and the ODWQ have been discussing efforts that involve the financial and managerial aspects of Capacity Development, as well as more technical training to assist the water systems in long range planning. Specifically, ASRWWA will be assisting small water systems in: setting up non-profit water system associations; preparing a water system budget and constructing a model rate structure; developing a model water district charter.

Water system web pages

Water systems and/or the public can either send electronic messages to the Capacity Development e-mail address, Safewater@doh.state.ri.us or to the Capacity Development Coordinator. A database with most of the community water systems e-mail addresses is has been developed over the last several years. In addition, DWQ has created web pages for each community water system on a HEALTH server. Each web page has information about the water system such as, demographic information, public meetings, a posting of all CCRs, and source water assessment information. The Capacity Development Program is assisting the Office of Health Communication in planning to incorporate GIS functionality into the HEALTH web site and ultimately make it available to water system operators and consumers. This will allow the water system owners/operators and municipal officials to expand and improve their knowledge in operating their water systems.

Water system guidance manual

To help systems maintain and achieve compliance, the Capacity Development Program is creating a small system guidance manual that will be useful tool to the owner/operator. This guidance, with ongoing updates, will contain pertinent information including: the state of Rhode Island Rules and Regulations Pertaining To Public Drinking Water, ODWQ contact list, fact sheets on rule and regulations, and technical, managerial, financial information.

Ongoing program evaluation through a self-assessment survey

Recently, the Capacity Development Program mailed out a self-assessment survey to all community and non-transient non-community water systems to gather information about the water systems and to assess their needs so that the Office may provide the appropriate assistance. This was an updated version of the first self-assessment survey, which was done four years ago. 50% of the surveys were returned. From the survey results, most small systems responded that they are in need of financial and managerial assistance. However, several systems are making strides in getting the help that they need through hiring management companies and/or securing strong board members. The self-assessment has been incorporated into the sanitary survey allowing for continuity of information to aid in the assessment of the water system needs. This fall, plans are underway to mail out the self-assessment survey to the transient non-community water systems.

Lessons Learned

Even though the Capacity Development Program has made some strides in improving the capacity of water systems, we have found that there are still gaps and room for improvement. We have found that on-site assistance is paramount in assisting small water systems with improvements and helping them maintain compliance, and that follow-up with these systems is key in assisting them with maintaining and achieving compliance. Secondly, even with the larger water systems, the regional meeting proved to be a valuable tool in communicating the pertinent information effectively and in establishing a working relationship with the water system officials.

Conclusion

This report has summarized the Capacity Development efforts, the efficiency of the program, and the progress towards improving the capacity of Rhode Island's public water systems. Overall, the Capacity Development Program along with the other drinking water programs have helped the water systems in Rhode Island maintain a very good record in providing high-quality safe drinking water.